

(if he sees it) is the point of maximum impulse—a ventricular spot adjacent to the heart's true anatomical apex?

2. The omission of pneumothorax and massive collapse from among those pathologic processes which may affect the position of the point of maximum impulse. The former may considerably displace that point from the affected side. The latter may almost equally draw it toward it.

3. The omission from the list (emphysema and obesity) of an important complication to accurate cardiac percussion—the female breast, when generous.

I find myself in hearty concurrence with his admission of the difficulties of right-sided cardiac percussion, his interpretation of the major signs of cardiac disease, and his reverence for detailed physical examination.

DEAF AND HARD-OF-HEARING CHILDREN: THEIR PHYSICAL AND MENTAL NEEDS*

By REXFORD HOOBLER, M.D.
Oakland

DISCUSSION by Elwood A. Stevenson, Superintendent of School for the Deaf, Berkeley; J. C. Edwards, M.D., Berkeley.

DURING the past fourteen years, I have been Director of Health at our State School for the Deaf in Berkeley. This covers a span of years necessary for the hard-of-hearing boy or girl to assimilate an education. I have followed many of these children from the time they entered school until their technical education was complete, and frequently during this time I stopped to consider if we were doing all we could to advance their physical and mental needs.

In reading medical literature discoursing on the physical and mental needs of the child of defective hearing, I found the subject dismissed with the statement: "The health problems of the deaf are handled in a special manner by those in charge of the deaf." So often have I met with this statement that I begin to think we do have special physical and mental problems, and that the best way to improve them is to share their knowledge with the pediatricians of the State. I ask that you be more conscious of the need of your assistance for their better health.

There is a very definite lack of confidence in the medical profession on the part of the parents of these children. I give the creation of false hope as the cause of this, whether it be our fault or that of poachers on the medical profession. You may supply the remedy.

On entry to the school, only about 20 per cent of the children are immunized to smallpox and diphtheria. According to late surveys, this is fairly high. Although immunity to pertussis has been in vogue for the past two or three years, it has not reached these children before their arrival at the school. There is need for greater insistence on immunity to these diseases.

SCHOOL STAFFS

Some of our city schools have added to their staffs supervisors of the conservation of speech,

sight, and hearing. This should be encouraged in your school, as prevention is the better way to attack the problem. Parents are being notified of defects in speech, sight, and hearing. If a parent should bring such a notice to you, please make a careful examination, as it may save some child from becoming hard of hearing, deaf, or blind. An audiometer is used to test the hearing of the children in most cases, and is probably more accurate in determining diminished hearing than any instrument you have in your office. This work has just started, and will probably make rapid progress.

CLASSIFICATION OF HEARING DEFECTS

If we are to keep up with what the educators expect of us, we must better equip ourselves and our offices. We should know how to classify the types of hearing defects. We should know how to sort the hard of hearing from the deaf child. We should know of the benefits of hearing aids and their limitations. We should know of the American Society for the Hard of Hearing and where the nearest League for the Hard of Hearing is. They should know of the nearest school for deaf children and of the facilities for lip-reading instruction for hard of hearing day-school children in our public schools. We should know what to say to the parents of these children as to their psychology and education. We should follow up every case to assist in its proper placement and its proper psychological adjustment.

IMPORTANCE OF SIGHT CONSERVATION

The deaf and hard of hearing are educated through the eye, to a far greater extent than normal children. Since the eye does double work, it is very necessary to conserve the vision. Thirty per cent of those with defective hearing wear glasses. On entry to the school, 10 per cent of the children are in need of or wear glasses. After two to five years, 25 per cent are in this class, and finally 30 per cent find the need of corrected vision.

STAFF AT THE STATE SCHOOL FOR THE DEAF

Our staff consists of a specialist in eye, ear, nose, and throat, a dentist, and a pediatrician. Contrary to general conception, the State School for the Deaf in Berkeley is not a home, clinic, or asylum, where the deaf and hard of hearing are committed, but a free boarding school where children of regular school age, capable of learning by special methods—are guests of the State for nine months of the year. The other three months of the year they return to their homes in your locality and are referred to you to correct defects not considered emergencies. We do not see all the hard of hearing and deaf children of the State. Many of them attend special classes for hard of hearing or deaf as day pupils in the public schools of the larger cities of the State, and so our special health problems and methods become yours as well.

A greater number of the pupils at the State School for the Deaf in Berkeley are totally deaf. They are sent there because of the greater difficulty in instruction, as well as the different methods used than with the hard of hearing. The ratio is ap-

*Read before the Pediatric Section of the California Medical Association at the sixty-sixth annual session, Del Monte, May 2-6, 1937.

TABLE 1.—*Causes of Deafness and Hard Hearing in State School for the Deaf*

	Per Cent	Ratio	
		Hard of Hearing	Deaf
Congenital	45	1	9
Spinal meningitis	12	1	36
Measles	4	1	6
Scarlet fever	4	1	11
Falls	4	0	11
Influenza	3	1	9
Mastoids	3	1	2
Birth injury	2	1	7
Abscessed ears	2	0	7
Pertussis	1	0	6
Pneumonia	1	3	2
Unknown	13	1	3
Others	4

proximately one to ten. I have been using the terminologies, "hard of hearing" and "deaf." Perhaps it is best briefly to explain. By amplification of sound the hard of hearing understand speech. The deaf cannot.

ETIOLOGY

The causes of deafness and hard of hearing at the School are as indicated in Table 1.

As far as the causes of defective hearing are concerned, they give us some idea where to put our efforts. I wish to state again that the foregoing percentages are based on a group of children predominately deaf and will not correspond with percentages given for hard of hearing and deaf children.

Congenital Group.—The congenital group of defective hearing shows 90 per cent deafness and 10 per cent hard of hearing. It comprises 45 per cent of all children in the School. Questionnaires returned by the parents give as the cause, "Born that way." We can only conjecture as to the specific cause. Marriage of defective hearing persons, illness in pregnancy, and administration of quinin and other drugs prenatally, are responsible for the majority of such cases. The early vicissitudes of prematurity, twins, and birth injuries may be included in this class. On the authority of E. A. Fay, marriage of persons, one or both of whom have defective hearing congenitally or adventitiously, are more apt to result in children of defective hearing than ordinary marriages. Persons of congenitally defective hearing, whether they are married to one another, to adventitiously defective hearing, or hearing persons, are more liable to have defective hearing offspring than are adventitiously defective hearing persons. In general, marriages in which a defective hearing person takes a hearing partner result in a higher percentage of defective hearing children than if they married among themselves. To encourage the defective hearing to marry among themselves, however, is contrary

to all laws of inheritance and would ultimately lead to a deaf race.

The percentage of defective hearing offspring in general runs from 2.2 per cent where one is adventitiously deaf or hard of hearing and the other hearing, to 25.9 per cent where both parents are congenitally deaf or hard of hearing. To reduce the number of congenitally deaf or hard of hearing, discourage conception, especially in the congenitally deaf or hard of hearing. This, however, is a delicate subject, and must be approached with care.

Our records assign illness in pregnancy as the cause of 0.3 per cent of the congenital defects in hearing. There is no way of determining the difference between an anomaly and inflammatory effects of pregnancy illness on the hearing apparatus. Lues, typhoid fever, pneumonias, toxemias of pregnancy and others probably account for a far greater percentage of congenital defects in hearing than we are aware of. Excessive administration, prenatally, of such drugs as quinin, salicylates, and others, affect the hearing apparatus of the unborn child. The difficulty of stating exact percentages is apparent here. There is need of greater care in giving such drugs.

Twins and prematurity have been assigned as the cause of a small percentage of our defective hearing. I know of no way to verify this, however, and since the cause of congenital defective hearing is mostly conjecture, I do not wonder that the physicians merely inform the parents that the child was "born that way."

Adventitious Group.—The causes of defective hearing in the adventitiously deaf or hard of hearing, however, give us more definite knowledge of where our efforts are needed. Spinal meningitis is responsible for 12 per cent of our hearing defects. The ratio of hard of hearing to deaf is one to thirty-six. The nerve is most frequently involved, which accounts for the large ratio of deaf. Let us hope that the newer conception of meningitis will reduce hearing defects.

Scarlet fever is responsible for 4 per cent of our enrollment. The ratio of hard of hearing to deafness is one to eleven. In spite of frequent middle-ear involvement, which should produce hard of hearing, our group would indicate a predominance of those where, through toxic effect, the nerve was involved, leading to deafness. I feel that more immunity, and more thought and care in handling, and more knowledge of how to handle scarlet fever, is definitely indicated.

Measles accounts for 4 per cent of our hearing defects. The ratio of hard of hearing to deaf is one to five. At the School, it has produced as many defective hearing as scarlet fever. Apparently the disease is considered too lightly.

Falls have been assigned as the cause of deafness in 4 per cent of our cases. It is recognized that concussions may result in hemorrhage into important hearing centers, and that fractures may even sever the nerve. Slight falls, however, which children have every day, and to which every mother attributes hearing defects, are not likely to be responsible.

Influenza is accredited with three plus per cent of deafness and hard of hearing. The ratio is one to nine, deafness predominating.

Radical mastoids involve removal of the conduction apparatus of the ear. Half of our mastoids are hard of hearing. Three per cent of our children have had radical mastoids. A type of radical mastoid is being tried out which leaves the conduction apparatus intact. Let us hope this will result in saving the hearing. In 2 per cent of our children, the parents give birth injuries as the cause of hearing defects. The ratio is one to seven. Deafness predominates. This probably does occur, but possibly less frequently than claimed. Greater care should be used in the application of forceps.

Abscessed ears, other than those caused by scarlet fever and measles, account for 2 per cent of our hearing defects. Is the pediatrician as well qualified to treat this condition as the otologist? I am aware that many of our leading pediatricians prefer the otologist to assume the responsibility. If it rests with the pediatrician, many of us must improve our technique.

Pertussis accounts for one plus per cent, all of whom are deaf. If the pertussis vaccine is efficacious, more children should be immunized.

As common as pneumonia is, less than 2 per cent of our children can claim this as the cause of their trouble. The ratio is two to three, deafness predominating.

"Unknown" is given as the cause of defective hearing among the adventitious to the extent of 12 per cent of the entire enrollment. The ratio is one hard of hearing to three deaf. This indicates the need of conservation of hearing in the School. It also indicates a use that can be made of the Social Security and Crippled Children's Acts.

Since these are the causes of deafness and hard of hearing, it is our duty, then, to be ever watchful of the children entrusted to our care that they may not have to endure this great handicap.

STATE LAWS TO AID DEAF AND HARD-OF-HEARING PERSONS

Certain laws exist for the medical care of indigents with defective hearing that you should know about. Such indigent persons or their families may apply for treatment in local county clinics or hospitals. If such institutions do not exist in the county, a certificate can be obtained from the Superior Court judge, and through the State Board of Health such treatment can be obtained in hospitals of other counties or through private individuals, as determined by the State Board of Health, the latter to pay for services, appliances, etc., and collect from the resident county. The Board of Supervisors, likewise, has the authority. The same applies to any indigent child at the State School for the Deaf. If the State Board of Health or County Board of Supervisors sees fit to assign the case to you, you can be compensated for your services. As a consequence no needy, physically defective or handicapped child under eighteen years of age need be without proper medical care and supervision. I understand certain phases of the Social

Security Act will be applicable to defective hearing children, also. Doctor Stadtmuller of the Bureau of Child Health of the California State Health Department, who is familiar with every phase of these Acts, is to present them at this meeting. She will undoubtedly show how they are further applicable to the children we are discussing.

TESTS FOR DEAF AND HARD-OF-HEARING CHILDREN

There is need for better performance tests for deaf and hard-of-hearing children. These children enter school with varying degrees of knowledge and capacity to acquire knowledge. Both the hard of hearing and deaf are generally backward, compared with hearing children. At present the non-language test is being used. New normals for the deaf and hard of hearing should be established. Dr. Olga Bridgeman is the only one I know of who can predict with any accuracy the mental capacity of these children on entry. It frequently takes months to determine a child's capacity for learning with our present methods. Where time, patience, intelligence, and love on the part of the parents are lacking, some of these children arrive at school age almost as wild children.

KINDERGARTENS

This suggests the necessity of establishing kindergartens for the deaf and hard of hearing in our public schools, which at the present time do not exist. The parents have no way of conversing with the deaf, and the hard of hearing pick up what language they can from frequently too busy parents. They need this preschool adjustment more than the hearing child. The hard of hearing at this age need the exercise of patience and time, to be taught at proper hearing distance, the sound and modulation of the voice and rudiments of language. Give your help to see that such kindergartens are established in appropriate centers so that the deaf and hard of hearing of kindergarten age can benefit by them.

MECHANICAL HEARING AIDS

Great progress has been made in the last few years in bone and air conduction hearing aids. There is need, however, for better and cheaper instruments for those interested in this kind of work. The cupped hand or megaphone has its place, but hearing aids greatly facilitate the accumulation of knowledge.

IN CONCLUSION

I have tried to give you a few of the physical and mental needs of deaf and hard-of-hearing children. I am not an otologist nor an educator, but a pediatrician, and as such my viewpoint is more general. As pediatricians, the physical and mental needs of these children are our problems. Please accept your responsibility and give careful thought to all matters pertaining to the prevention of defective hearing and the treatment and adjustment of all things pertaining to the physical and mental betterment of the deaf and hard-of-hearing child.

1624 Franklin Street.

DISCUSSION

ELWOOD A. STEVENSON, Superintendent of School for the Deaf, Berkeley).—Perhaps the best approach to this discussion would be to classify the deaf child and to indicate a few of the specific problems confronted by the average physician, otologist and layman. In the first place, one should have a very definite understanding as to who is deaf and should not confuse him with any other type of handicap.

A deaf child is one who has lost all use and function of hearing. He has no remnant of hearing for the actualities of life. He is deaf and cannot understand spoken language through the sense of hearing. The deaf child does not have partial hearing; he cannot "hear a little." The fact that a deaf child might possess very clear intelligible speech does not alter the fact that he is deaf. He may or may not be able to speak, such condition depending on several factors. A child who hears, but does not speak is not a deaf child. Yet oftentimes such children are looked upon as being deaf. One who "hears a little" and can understand spoken language, although with great difficulty, is not deaf. Such a child is hard of hearing. Do not confuse the two. One cannot hear. The other hears although defectively. Each presents a different problem educationally, medically, and economically. As the name implies, this child still possesses hearing although defective. He can hear, provided the source is brought within his hearing range. Suitable hearing aids are of benefit to the hard of hearing. Aids should never be recommended for the deaf. It is useless and criminal to do so. Salesmen should understand this.

Do not be deceived when a deaf child responds to sound or to the call of his name. He is, nevertheless, deaf and possesses only what is termed "sound perception," and not hearing. Do not be surprised when I say that practically 85 per cent of all deaf children possess sound perception. It might be termed a "slit of hearing," in the same way as one terms "slit of vision" in the blind person. The deaf child can react to audiometer tests and yet has no usable hearing.

Naturally, the easiest and quickest way to educate is through the sense of hearing. The deaf child must be educated, however, entirely through vision. He is taught through lip reading, speech, written work, and reading. However, all deaf children are not capable of speaking and of lip reading, and for several reasons. Some can and some cannot. Furthermore, the ability of lip reading is not always indicative of a higher mental ability. With the deaf, the avenue of hearing as a means of instruction is entirely cut off.

In contrast, the hard of hearing child already possesses speech. He also can take instruction through his hearing, provided speech is brought within his range either by getting closer to him or by use of a suitable hearing device. He, likewise, learns lip reading to supplement his hearing. Under normal conditions, he can cover ground more rapidly than can a deaf child. Naturally, at the normal distance for hearing, the hard-of-hearing child does not hear normally. However, through the practice of lip reading he is sometimes enabled to understand spoken language by hearing the vowels, which are difficult to see, and by seeing the consonants, which are mostly visible to the eye. Because of his possession of speech, which may or may not be defective, because of his usable hearing, made possible by adjusting the distance from the source or by using suitable hearing aids, the hard-of-hearing child has a great advantage over the deaf child in securing his education, and in making his social and economic adjustment. For these reasons, he should not be treated and educated with deaf children.

To the average deaf child, the use of the English language is the most difficult. Remember, the use of English to the deaf child is like the study of a foreign language to you, only infinitely more serious. In studying a foreign language you have your hearing and also your mother tongue for guidance. The deaf child has not. The key to his success in his future adjustment is his understanding and use of language. Speech and lip reading are essential, but are of very little value without language. The necessary factors for the proper adjustment are, first, a good education, and, second, the knowledge of a suitable trade; and both these factors are naturally strengthened by the ability to speak intelligibly and to read lips. If then given

an even opportunity by the public, he can easily assume his responsibilities as a citizen and take his place in the world at large.

You, as doctors, can play a very important part in the lives of deaf and hard-of-hearing children by studying and understanding the problems and knowing what to do. For the hard-of-hearing child give remedial care when possible, and advise lip reading and necessary health care for all. For the deaf child, recommend immediate placement in a suitable school for special instruction. There is no cure for total deafness and no outgrowing it. Proper education is the cure. There is a state law requiring every physician to report to the Superintendent of the School for the Deaf in Berkeley every deaf child or seriously hard-of-hearing child who passes through his hands. By making these reports quickly and to the proper authorities, a deaf child's future may be saved. Too often a deaf child is sent to school years after the fact is discovered, and at a time when it is too late to do anything. Such cases are tragic. Of all groups of handicapped children, the deaf child, at best, has the most difficult time in obtaining an education. Think of your own good fortune and blessings, and through your service to the deaf child and to the hard of hearing at the right time, make it possible for them to have the opportunity of sharing these blessings which should come to them in greater measure because of their handicap.

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J. C. EDWARDS, M. D. (2140 Shattuck Avenue, Berkeley).—The pathologic changes relating to the ear and the various causes of deafness are so numerous that only a brief outline is contemplated in this discussion. Deafness does not necessarily mean total deafness. There are persons in whom only certain sounds are vague, indistinct, or absent. These persons are handicapped very little in their normal pursuits. They have so-called islands of deafness for certain sounds and musical tones, and their hearing above and below these zones may approach the normal. Others have a diminution for all tones, but by close attention and concentration can distinguish, with an effort, the well-spoken voice. These are the hard of hearing. We pass through the various shades of deafness to those cases where all sound concept is absent, where music and voice and the everyday sounds exist only in the imagination. These are the totally deaf, and their misfortune produces a great social and economic problem. For them, natural communication and expression is impossible or unsatisfactory. The child born deaf may have normal speech mechanism, but having heard no speech, this mechanism remains dormant. However, in some cases a fair degree of distinguishable speech may be developed by long and painstaking teaching.

Deafness is caused by pathological changes occurring either in the conduction mechanism or the perceptive mechanism of the ear or a combination of both. The conduction mechanism comprises the outer ear, the external canal, ear drum, the chain of ossicles or bones leading from the ear drum across the middle ear to the oval window, the middle ear itself, and the eustachian tube. The perceiving mechanism is the cochlea, containing the organ of Corti, the cochlear branch of the auditory nerve and the terminal endings of this nerve in the brain. Consequently, we diagnose deafness as conduction or perception deafness. The degree and nature of the deafness are determined by various methods, chief among which is the ability to hear the spoken voice, whisper, tuning forks, audiometer and other mechanical sounds.

Conduction deafness indicates that sound waves are unable to reach the perceiving mechanism, and this deafness may be due to numerous causes, among which are hypertrophied tonsils whose upper poles may be compressing the eustachian tubes, adenoid growths around the mouths of the tubes, acute and chronic catarrhal changes in the middle ear, ossicles and tubes, thickened, inelastic ear drums, large perforations in the drums, malformations of the external auditory canals, sinus infections, marked occlusion of the nasal passages from various causes, etc.

Perception deafness means that the nerve impulse is either not initiated or that it is blocked along some part of its course to the brain.

In those born deaf, some intra-uterine change has taken place within the cochlea, or the inner ear has not completed

its natural development, or the nerve tract does not function or is absent, or either the cerebral or cochlear nerve filaments has failed to make proper connections.

Acquired deafness is due, to a large extent, to the acute diseases of childhood. These diseases may result in either conduction or perception deafness, or both. It is interesting to note that in acquired deafness, resulting after the child has heard and spoken, the memory of the speech and the ability to express itself with the spoken word is often retained, while the child born deaf has never heard the spoken word and is unable to speak because it has no memory of past speech.

Sound reaches the ear through two media—air and bone. Normally, the sound of a vibrating tuning fork heard in the air lasts from two to three times as long as the same fork heard by placing it on the skull. The change in the relationship of this time element is very helpful in determining the nature of the deafness.

The most practical method of determining the nature and degree of deafness is by vibrating tuning forks. These forks represent various tones according to their rate of vibration. The audiometer is a device producing various degrees of sound by means of electrical vibrations. It is indispensable in mapping the degree of hearing. However, in a great many cases its findings are only of scientific interest, as these cases are beyond artificial hearing aid.

In recent years hearing devices have been improved to a marked extent both as to air and bone conduction. At the present time plaster of paris casts of the canals are being made for each individual case, the resultant cast being of hard rubber and fitting snugly into the ear canal. To this cast is attached the vibrating element. Many of the hard-of-hearing children are being benefited by these devices, some hearing better by air conduction, while in others bone conduction accomplishes the better result. In the hard-of-hearing cases, it is always advisable to have an audiometer diagnosis and the hearing aid tuned to its findings, rather than to accept any hearing device as advertised.

The deaf child being deprived of one of the principal senses must, therefore, to a great extent, depend on sight.

In consequence of this fact, emphasis is placed on thorough and frequent eye examinations. All children at the School for the Deaf are subjected to ophthalmoscopic examinations and retinoscopic study for refractive errors. It is absolutely necessary in children to suspend their accommodation by the use of atropin or homatropin in order to arrive at the proper diagnosis of their refractive error. The habit some doctors have of referring children to optometrists should be discouraged. Refractive errors, which in the normal child would be disregarded, are usually corrected in the deaf child and glasses prescribed. Frequently we find the stigmata responsible for the deafness reflected in the eyes. Partial optic nerve atrophy, choroiditis, retinal changes, high degrees of myopia and hyperopia, interstitial keratitis, and congenital cataracts, are some of the eye conditions encountered.

Each child entering the School receives a complete physical examination. The upper respiratory tract is minutely inspected for any pathology, the correction of which might improve the hearing. The contour and size of the outer ear, the external auditory canals, the condition of the ear drums, if present, and the nature and amount of any aural discharge are noted. Any remnants of hearing are recorded on the audiometer in view of some mechanical hearing aid.

Where surgical intervention is indicated, the parents are notified and their consent requested for the necessary surgery. However, there are many instances where ignorance, superstition, or indifference on the part of the parents or those responsible, and the teaching of certain cults operate to the detriment of the deaf child.

There still remains a wide gap between modern medicine and certain individuals. The old beliefs and superstitions linger in these people. We must be teachers as well as doctors. Preventive medicine and curative medicine should go hand in hand. You, as pediatricians, see many of these unfortunate children first. You should be thoroughly familiar with all of the problems surrounding the two greatest causes of human economic loss—*blindness and deafness*.

THE LURE OF MEDICAL HISTORY†

SARRÍA'S TREATISE ON THE CESAREAN OPERATION, 1830*

By SHERBURNE F. COOK, Ph.D.

Berkeley

II‡

TREATISE ON THE METHOD OF PERFORMING THE CESAREAN OPERATION

I. Repeated thanks should we render to Divine Providence for having brought it about that a matter of such sublime importance as the practice and application of the cesarean operation has come to be, should be freed from that multitude of doubts, arguments, and authorities with which most of the ancients obscured it, and by means of which they vitiated its most happy progress and results. Even further, Divine Providence has achieved their destruction and elimination forever by powerful and convincing means, as is a frequent experience. All of this is well known to scholars, and to set forth the matter in great detail would mean the inclusion of much erudite material, interesting from the point of view of fact, but little or not at all conducive to the primary purpose which we have in mind, namely, to render more accessible and clear the method and procedure of that operation for the greatest good which can be derived from it.¹¹§ For this purpose we have consulted certain of the more classical authors who treat of the matter, but particularly Father Rodriguez, the Cistercian Monk, in his very learned work *Nuevo Aspecto de Teología Medico Moral*, Volumes 1 and 4, where, with subtlety and thoroughness, he explains the matter well. This being understood, it is quite obvious that on the cesarean operation, in those cases where it needs to be performed, depends the spiritual and even corporal salvation of innumerable unborn persons. Also the obligation is evident which the priests owe to justice and the clergy in general to charity in the matter of coöperating for the salvation of souls. Furthermore, very generally known are the decrees of various councils and the orders of the bishops and magistrates to the effect that the cesarean operation shall never be omitted in any case in which it might be hoped that thereby spiritual aid could be rendered to the offspring.** It is equally clear that in many small towns and villages there is lacking any person ex-

†A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of CALIFORNIA AND WESTERN MEDICINE. The column is one of the regular features of the Miscellany department, and its page number will be found on the front cover.

*From the Division of Physiology, University of California Medical School, Berkeley.

‡Part I of this paper appeared in last month's issue, on page 107.

11 The footnotes designated by symbols, not numbers, are those which occur in the original.

§See, concerning this matter, Chapter 7, lines 12 to the end, Book II of the diocesan synod.

**In Volume 4, Paradox 2, Chapter 1, of the work of Rodriguez, there are found references to these decrees of councils and orders of bishops and magistrates. And the Roman ritual, treating of the sacrament of baptism, says: *Sic mater pregnantis mortuus fuerit feto quam primus extrahatur si vivus fuerit baptizetur.*¹²

¹²The Latin is inaccurate, but in general the passage may be translated: "If the mother shall die before the child is born, it shall be removed, and if it is alive it shall be baptized."